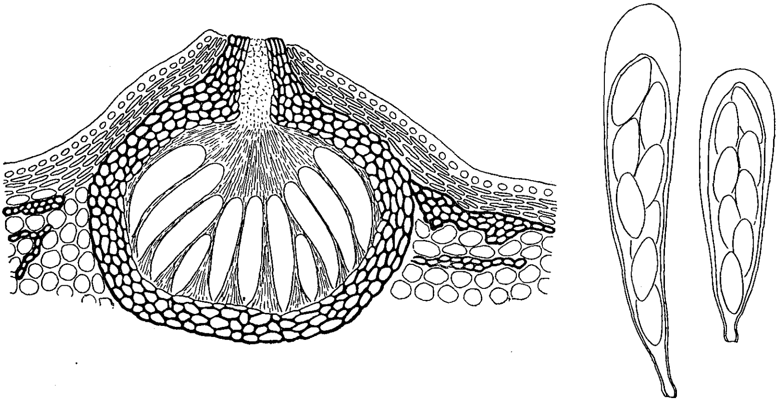
Ken KATUMOTO*: Notes on Fungi from Western Japan (9)

勝本　謙*: 西日本産菌類論考 (9)

89. Botryosphaeria dothidea (Moug. ex Fr.) Ces. et de Not., Comm. Soc. Critt. Ital., 1: 212, 1863——Saccardo, Syll. Fung., **1**: 460, 1882——von Arx & Müller, Beitr. Kryptog.-fl. Schw., **11** (1): 37, 1954——Munk, Dansk. Bot. Ark., **17** (1): 468, 1957——Dennis, Brit. Cup Fungi: 237, 1960.

The stromata are gregarious, immersed, subglobose to depressed globose or pyriform, mostly with one locule, sometimes with two or rarely three locules, papillately protruded at the apex and slightly erumpent through the epidermis of the host plant, 200～250μ in diameter, and 160～200μ in height. The peridium of stroma is membraneous to coriaceous, pseudoparenchymatous, blackish brown, 25～30μ in thickness, dehiscent and ostiolate at the apex, composed of the cells which are polyhedral, isometric and 6～16μ in diameter. The asci are clavate, bitunicate, rotundate and thickened at the apex, shortly stipitate, containing eight ascospores in two rows, and 75～120×15～18μ. The paraphysoids are filiform, hyaline, simple, 2～2.5μ in thickness. The ascospores are oblong to oblongate fusoid, continuous, rounded at both ends, hyaline, smooth, and 21～28×7.5～9μ.



Figs. 1-2, *Botryosphaeria dothidea*: 1 left, stroma×200. 2 right, asci and ascospores×400.

Hab. on the dead branches of *Cedrela sinensis* Juss. Tyôhu, Simonoseki City, Prov. Nagato (Nov. 26, 1964. K. Katsumoto).

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This is one of the most common species of the genus *Botryosphaeria* throughout the world. The fungus, however, has scarcely been known to occur in Japan, and recorded with various different specific names; viz. *Botryosphaeria buergeriana* de Not. reported by K. Hara on *Thea sinensis* L. and *B. ribis* Gross. et Dugg. by T. Hemmi on *Malus sylvestris* Mill. This species typically contains two or three locules in a stroma, but often shows unilocular-type as is mentioned above by the present writer. The fungus found on tea plant was also proved to sometimes have unilocular stromata according to Hara.

90. Botryosphaeria quercuum (Schw.) Sacc., Syll. Fung., **1**: 456, 1882——von Arx & Müller, Beitr. Kryptog.-fl. Schw., **11** (1): 33, 1954.

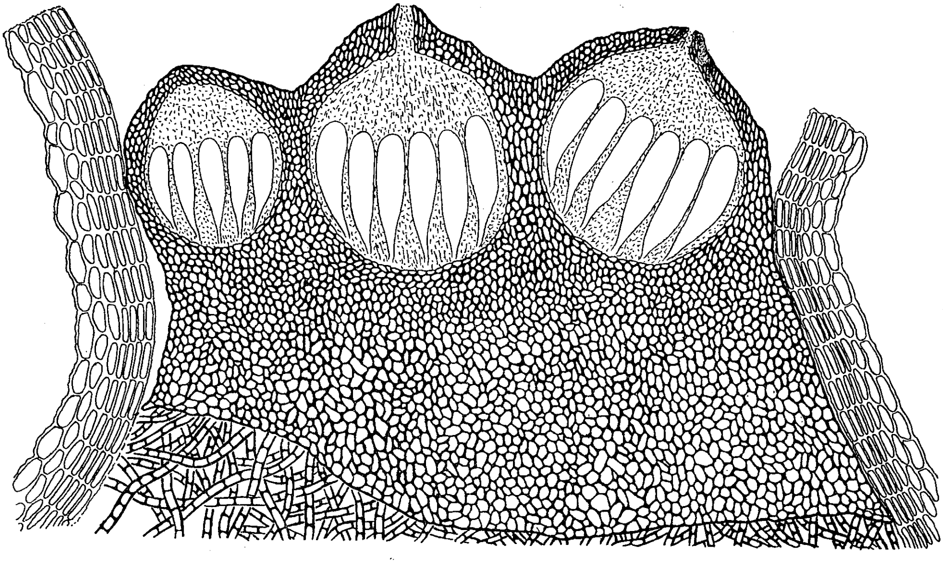


Fig. 3. *Botryosphaeria quercuum*: stroma ×120

The stromata are gregarious, immersed, later erumpent, pulvinate, containing two or usually three locules, sometimes subglobose to pyriform and unilocular, 650～800μ in width and 400～500μ in height. The contexture of stromata is subcoriaceous, pseudoparenchymatous, blackish brown, ostiolate at the apex, composed of the cells which are polyhedral, isometric, and 5～12μ in diameter. The asci are clavate, bitunicate, rotundate and thickened at the apex, shortly stipitate, containing eight spores in two rows, and 75~96×15~22μ. The ascospores are fusoid to oblongate fusoid, continuous, rounded at both ends, hyaline, smooth, and 24~35×8.5~12μ.

Hab. on the dead branches of *Rhus succedanea* L. Takeda City, Prov. Bungo (Dec. 2, 1959. I. Hino) and on the dead stems of *Rubus Sieboldi* Bl. Tyôhu, Simonoseki City, Prov. Nagato (Feb. 24, 1965. K. Katumoto).

This is also the most common species of the genus *Botryosphaeria*, and has been previously recorded in Japan with different names, especially with those of the genus *Physalospora*. The fungus on *Malus sylvestris* Mill. was reported by various authors to be *Physalospora obtusa* (Schw) Cooke, and that on *Acer japonicum* Thunb. var. *parsonii* Veitch was reported by E. Tsukamoto and S. Katsuki to be *Physalospora macrospora* Feltgen, though these fungi seem to be identical with the species in question.

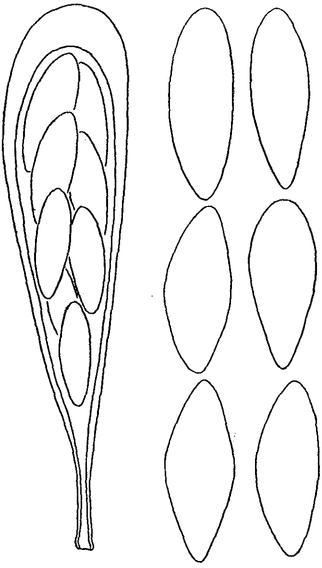


Fig. 4. *Botryosphaeria quercuum*: asci ×700 and ascospores ×800

91. Amphisphaeria palmicola (Hino et Katumoto) Hino et Katumoto, comb. nov. *Didymosphaeria palmicola* Hino et Katumoto in Katumoto, Journ. Jap. Bot., **38**: 26, 1963.

Hab. on the dead petioles of *Livistona subglobosa* Mart. Aosima, Miyazaki City, Prov. Hyûga (March 2, 1955. K. Katumoto—Type in Herb. FAUY).

The perithecia are immersed, erumpent and somewhat umbonate at the apex, and opening with the ostioles along which the periphyses grow. The asci are long cylindrical, unitunicate, and contain ring-like apical apparatus which is highly stained bluish with Melzer's reagent.

The fungus seems to be preferably transferred to the genus *Amphisphaeria* in consideration of the characteristics of perithecia and apical apparatus of asci.

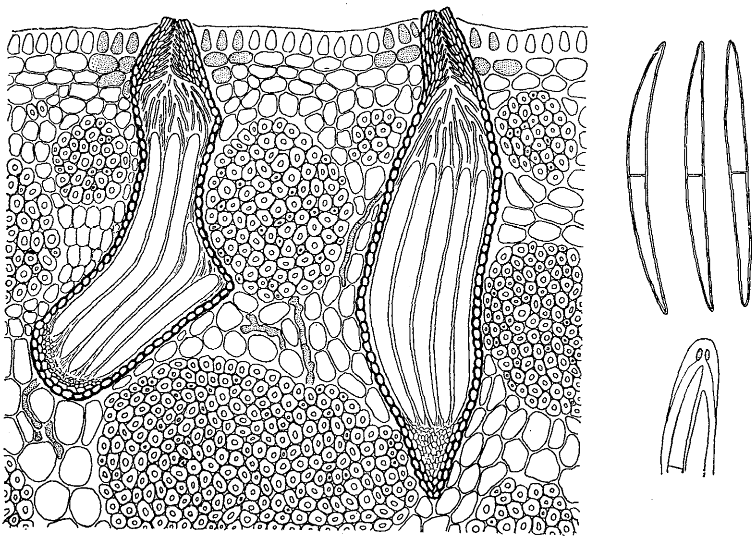
92. Leiosphaerella livistonae Hino et Katumoto, sp. nov.

Peritheciis sparsis, immersis, ventricoso tubuliformibus, 350~400μ altis, 60~80μ latis; peridiis unistratosis, membranaceis, pseudoparenchymaticis, atro-brunneis, apice ostiolatis, ex cellulis polyhedralibus, isodiametricis et 7~15μ diam. compositis;

ascis fasciculatis, basilalibus, longi cylindraceis, apice rotundatis, stipitatis octosporis, 160∼200×7∼10μ; paraphysibus filiformibus, simplicibus, hyalinis, conglomeratis ad maturitatem; ascosporidiis distichis, longi fusoideis, ad medio 1-septatis, non constrictis, apice utrinque acuto obtusis, plerumque leviter curvatis, laevibus, hyalinis, guttulatis, 90∼105×5∼6.5μ.

Hab. in petiolis putrescentibus *Livistonae subglobosae* Mart. Aosima, Urbs Miyazaki, Prov. Hyûga (Mar. 2, 1955. K. Katumoto-Typus in Herb. FAUY).

The hyphae are penetrating into intercellular portion of the host tissue, septate, fuscous brown, and 3∼4μ in diameter. The perithecia are immersed into the parenchymatous tissue of the host plant, typically long bottle-like in shape, but frequently somewhat irregular and conoid to triangular because of the conflict with the vascular bundles abundantly formed to restrain the perithecial tissue of the fungus from penetration. The apical portion of the perithecium is slightly erumpent through the epidermis and ostiolate, but not so distinctly protruded. The epidermal and the hypodermal cells of the host plant near the apical portion of the perithecia are infested with the fungal tissue and darkened. The asci are very long, and



Figs. 5-6, ***Leiosphaerella livistonae***: 5 left, perithecia ×200. 6 right, ascospores ×400 and apical portion of ascus.

containing ring-like apical apparatus which is easily stained bluish with Melzer's reagent.

The fungus is to be included in the family Amphisphaeriaceae in respect to the apical apparatus of the asci, and it seems to belong to the genus *Leiosphaerella* v. Höhn. with regard to the morphology of the ascospores. *Leiosphaerella phoenicis* (Chona et Munjal) E. Müller et Ahmad was previously recorded to be parasitic on *Phoenix dactylifera* L. in India and Pakistan. However, it is distinguishable from the writer's fungus in respect to the shorter longitudinal dimension of the asci or ascospores.

93. Meliola formosensis Yamamoto, Trans. Nat. Hist. Soc. Formosa, **31**: 18, 1941: Sci. Rep. Hyogo Univ. Agr. Ser. Agr. Biol., **3** (2): 72, 1958——Sawada, Spec. Publ. Coll. Agr. Nat. Taiwan Univ., **8**: 33, 1959——Hansford, Sydowia, Beih. **2**: 240, 1961.

The colonies are epiphyllous, orbicular to rather irregular, cobwebby, dusky, and up to 1 cm in diameter. The mycelium is sparsely reticulate, erect or undulate, oppositely ramose, fuscous brown, 6.5～8μ in width, and composed of the cells which are 15～46μ in length. The capitate hyphopodia are alternate or rarely opposite, 2-celled, erect or sometimes curved, the apical cells are globose to subglobose, 9～14μ in diameter, and the basal cells are shortly cylindrical, 4～6μ in height. The mycelial setae are gregarious around the perithecium, erect or slightly curved, narrowed toward the apical portion, simple, obtuse at the apex, septate, fuscous brown, 200～360μ in length and 8～9μ in width. The perithecia are sparse, globose, blackish, 150～200μ in diameter. The ascospores are cylindrical, erect, rounded at both ends, 4-septate, constricted at the septa, dark brownish, containing large drop particles, and 30～40×9～13μ.

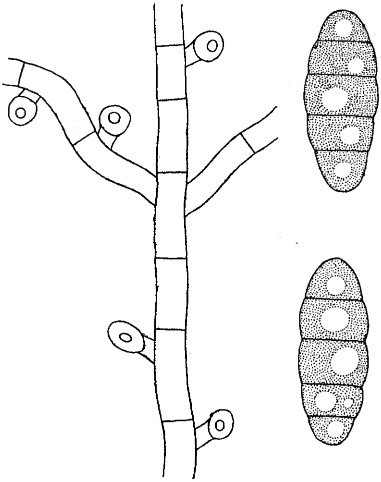


Fig. 7. *Meliola formosensis*: mycelia, hyphopodia and ascospores ×700.

Hab. on the living leaves of *Rubus Sieboldi* Bl. Mt. Miyanouradake, Yaku Isl., Prov. Oosumi (Aug. 4, 1955. K. Katumoto).

Distrib. Taiwan (Formosa)

The present fungus has been known to be parasitic on various species of the genus *Rubus* in Taiwan, and is now newly added to the mycological flora of Japan. *Rubus Sieboldi* is a new host plant of this species. In Japan *Appendiculella calostroma* (Desm.) v. Höhn. has hitherto been known to be a unique Meliolaceous fungus parasitic on the plants of the genus *Rubus*.

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89. **Botryosphaeria dothidea** (Moug. ex Fr.) Ces. et de Not.

90. **Botryosphaeria quercuum** (Schw.) Sacc.

両者ともに分布および寄主範囲の極めて広い種類である。通常子座中には2〜3個の子嚢室を埋没して生ずるが，しばしばただ1室からなる子座を生じ，このため*Physalospora*属などの菌として記載されていることがあり，したがって異名が非常に多い。

91. **Amphisphaeria palmicola** (Hino et Katum.) Hino et Katumoto.

子嚢殻の頂部は寄主の表皮を破って疣状に突出し，また子嚢頂部には沃度で青変する輪状物を含むことから*Amphisphaeria*属に移した。

92. **Leiosphaerella livistonae** Hino et Katumoto (新種).

ビロウに寄生し，中央部のやや膨れた長円筒形の子嚢殻を寄主組織中に埋没して散生する。口孔部はほとんど突出せず，外観は微細な小黒点として現われるが，肉眼ではほとんど認められない。子嚢頂部には沃度で青変する輪状物を含み，また子嚢胞子は長紡錘形，中央に1隔膜を有し無色，両端は漸細し尖っている。子嚢および子嚢胞子の形態は，Amphisphaeriaceae中の*Leiosphaerella*属の特徴によく一致する。インドおよびパキスタンに*Phoenix*属に寄生する*L. phoenicis*が知られているが，筆者の菌は子嚢および子嚢胞子の長さがいちじるしく長い点で容易に区別される。

93. **Meliola formosensis** Yamamoto (日本新産)。

ホウロクイチゴの葉に寄生する。日本には*Rubus*属に寄生するMeliolaceaeの菌としては*Appendiculella calostroma* (Desm.) v. Höhn. のみが知られていたが，台湾で記載された本種が九州屋久島に分布していることを明らかにした。

□マヘシュワリ教授を悼む インドのDelhi大学P. Maheshwari教授 (1904-1966) がこの5月18日突然死去されたことを悼む。

P. Maheshwariは1904年11月9日インドJaipurに生れ，そこで幼青年時代を送り，1921年AllahabadのEwing Christian Collegeに学び1925年卒え，さらにそこでM. Sc. (1927), D. Sc. (1931) の学位を得，この間，被子植物の形態学，解剖学，発生学を研究した。その後Agra; Allahabad, Lucknow, Dacca大学に教鞭をとり，1949年